

COUNTY OF LOUDOUN
DEPARTMENT OF PLANNING
MEMORANDUM

DATE: September 18, 2008

TO: Loudoun County Planning Commission

FROM: Marchant Schneider, Project Manager

SUBJECT: September 23, 2008 Planning Commission Committee of the Whole
Loudoun County Public Schools – Lenah Property
SPEX 2008-0017, CMPT 2008-0007

BACKGROUND

The Planning Commission held a public hearing regarding the above-mentioned applications on September 10, 2008. Forty-seven members of the public spoke regarding the applications. Seventeen spoke in favor of the applications and thirty opposed the applications. A petition in favor of the project was submitted for the public record. The Commission voted 9-0 to forward the Special Exception (SPEX) and Commission Permit (CMPT) applications to the September 16, 2008, Committee of the Whole for further discussion of the outstanding issues identified in the September 10, 2008, Planning Commission Public Hearing Staff report as well as questions offered by the Commission at the September 9, 2008, Planning Commission worksession.

Staff organized the Planning Commission's questions into multiple topic areas to help facilitate the Commission's discussion. Questions regarding Utilities and General Plan policy were discussed at the September 16, 2008, Planning Commission worksession. Questions subsequent to the discussion are identified below. The balance of Commissioner questions identified at the September 9, 2008, worksession are attached and answered separately by the Applicant.

APPLICANT REVISIONS

As noted at the September 10, 2008, Planning Commission Public Hearing, the Applicant has withdrawn its proposal to utilize an irrigation well for use in the maintenance of competition fields associated with the High School Use. The attached development Conditions of Approval include the revision (see Attachment 2).

QUESTIONS SUBSEQUENT TO SEPTEMBER 16, 2008, WORKSESSION

Subsequent to the Commission's discussion at the September 16, 2008, worksession, the following questions were raised by Commissioners. If not answered by Staff below, the questions are answered separately by the Applicant in Attachment 3.

UTILITIES

1. *Provide the distance, cost and timing for the installation of the water main constructed by Greenvest along Braddock Road east of Route 659.*

LCSA/Loudoun Water identifies this segment as "Phase I Braddock Road Waterline." The segment is between Route 659 (Gum Spring Rd) and Rt 616 (Goshen Rd). The project totals 7,700 linear feet of watermain. 1,400 linear feet is comprised of a 16" watermain and 6,300 linear feet is comprised of a 24" watermain. The permit for the project was issued on May 4, 2007. The project was completed on April 27, 2008 (approximately 10-11 months).

2. *Address the suggestion that waterline easements be dedicated up front prior to construction of the waterline.*

GENERAL PLAN

3. *Provide a breakdown of the Applicant's Traffic Distribution Map (i.e. provide the number of trips and identify areas from which they are generated).*
4. *Provide current class sizes for Freedom High School and Mercer Middle School.*
5. *Identify the number of students walking to Freedom High School and Mercer Middle School.*
6. *How is building programming determined?*

OTHER

7. *Would the Seller be willing to renegotiate the price of the land?*

COMMISSIONER QUESTIONS FROM SEPTEMBER 9, 2008, WORKSESSION

Commissioners requested information on a variety of topics at the briefing of the applications at the September 9, 2008, Planning Commission worksession. Staff has organized the topics into the general categories Utilities, General Plan, Transportation, School-Specific, and Miscellaneous / Procedural. As noted above, Commissioners discussed questions specific to water/sewer service to the proposed schools (Utilities) and General Plan policies at the September 19, 2008, worksession.

The balance of Commissioner questions identified at the September 9, 2008, worksession are included as Attachment 4 and, if not answered by Staff below, are answered separately by the Applicant in Attachment 5.

SCHOOL-SPECIFIC

40. *Staff report states project will not negatively impact wildlife habitat. What habitat exists on the property and how will it be impacted?*

Applicants are required to submit with an application for Special Exception an Endangered and Threatened Species (ETS) Habitat Evaluation and Rare Plant Species / Community Assessment. According to the study, no ETS, rare plant species, or rare plant communities were observed within the study area. Further, the subject property has been farmed during various periods. The Applicant will retain existing natural features outside the limits of grading and clearing to accommodate the proposed uses. Staff has found that the application preserves appropriate environmental resources on the Property and the disturbance to wildlife habitat acceptable.

FIRE-RESCUE

Note: Fire-Rescue Staff will be in attendance at the September 23 worksession.

44. *What is the first response station and what is anticipated response time?*

The first due company to the Lenah property is the Arcola Pleasant Valley Fire and Rescue Company. The estimated travel time is 5 minutes, 24 seconds and the estimated response time is 7 minutes, 24 seconds.

45. *What are the Fire-Rescue Levels of Service? Have they been met for the site?*

The Service Plan for the Loudoun County Fire and Rescue System establishes response times for urban, suburban, and rural areas. The Service Plan identifies the subject site as "rural". The Service Plan response time goal is be at a scene within 14 minutes 80% of the time. As mentioned above, the estimated response time to the subject property is 7 minutes, 24 seconds.

46. *Provide the service map used by Fire-Rescue.*

See Attachments 6 & 7.

MISCELLANEOUS / PROCEDURAL

49. *How will a new school increase the County's tax base?*

The proposed Middle School and High School uses are consistent with the policies of the Transition Policy Area and will provide desirable employment in support of the education of the County's student population, thereby enlarging the County's tax base. The Department of Economic Development considers public and private education to be

the cornerstone to an attractive business environment and necessary to provide a highly educated workforce capable of supporting the County's desired employment base.

ISSUE STATUS

The September 10, 2008, Planning Commission Public Hearing Staff Report identified several outstanding issues regarding the applications. The status of these issues is outlined below.

1. **Route 50 / Lenah Road Intersection Improvements.** The Applicant's Traffic Impact Study indicates an immediate need for a traffic signal and westbound left turn lane on Route 50. By 2011, additional turn lanes are necessary (eastbound Route 50 and northbound Lenah Road). Based on the recommendation of the Traffic Impact Study, Staff has recommended that the Applicant build all required improvements (Condition 8e). The Applicant proposes to install the traffic signal and westbound turn lane. Consideration of the alternative improvement by the Commission is requested by the Applicant.

Issue Status: By comments dated August 27, 2007, the Virginia Department of Transportation (VDOT) recommended similar improvements to the intersection. The Applicant's September 12, 2008 response to VDOT comments (see Attachment 8) states that following the opening of both schools (2011), and with the addition of a traffic signal and a westbound turn lane, the intersection will operate at an acceptable level of service. The Applicant, Staff, and VDOT met on September 16, 2008, to discuss the Applicant's September 12 response. It is anticipated that VDOT and the Office of Transportation Services will provide a formal response prior to the Commission's worksession on September 23.

2. **Phasing and Extent of Transportation Improvements – Braddock Road.** Due to the estimated number of trips accessing the school site to and from the east along Braddock Road (55% or approximately 2,500 trips), Staff has requested the Applicant provide documentation regarding the status and/or estimated completion date of paved road improvements to Braddock Road.

Issue Status: The Planning Commission requested similar information during its worksession on September 9. See Attachment 1 included with the Applicant's response to the Planning Commission's Briefing Questions (see Attachment 5). The Applicant will provide supplemental information at the September 23 worksession.

3. **VDOT Comments.** Comments received from the Virginia Department of Transportation (VDOT) dated August 27, 2008, recommends, among other items, additional lane improvements to the Lenah Connector Road bordering the eastern boundary of the subject site as well as a monetary contribution toward the intersection of Braddock Road and the planned Lenah Loop Road.

Issue Status: As noted above, the Applicant, Staff, and VDOT met on September 16, 2008, to discuss the Applicant's September 12 response to VDOT's August 27 comments. It is anticipated that VDOT and the Office of Transportation Services will provide a formal response prior to the Commission's worksession on September 23.

STAFF RECOMMEDATION

Pending conclusion of the above issues, Staff recommends that the Planning Commission approve the Commission Permit and forward the application to the Board of Supervisors for ratification. Staff further recommends that the Planning Commission forward the Special Exception application to the Board of Supervisors with a recommendation of approval with development conditions. As proposed, the use is consistent with the existing land use policies of the Revised General Plan for the subject area (Transition Policy Area) and with the Revised 1993 Zoning Ordinance.

DRAFT MOTION(S):

- 1a. I move that the Planning Commission forward SPEX 2008-0017, Loudoun County Public Schools – Lenah Property, to the Board of Supervisors with a recommendation of approval, subject to the Conditions of Approval dated September 23, 2008, and based on the Conclusions contained in the September 10, 2008 Planning Commission Public Hearing Staff Report, as amended by the Commission.

and

- 1b. I move that the Planning Commission approve CMPT 2008-0007, Loudoun County Public Schools – Lenah Property, and forward the application to the Board of Supervisors for ratification based on the Conclusions contained in the September 10, 2008, Planning Commission Public Hearing Staff Report, as amended by the Commission, and subject to the Commission Permit Plat dated February 14, 2008 revised through August 6, 2008.

OR,

2. I move that the Planning Commission forward SPEX 2008-0017 and CMPT 2008-0007, Loudoun County Public Schools – Lenah Property, to the Committee of the Whole for further discussion.

OR,

3. I move an alternate motion.

Attachments

1. Conclusions
2. Conditions of Approval dated September 23, 2008
3. Additional Questions Raised at the 9/16/08 Work Session, Prepared by Loudoun County Public Schools
4. September 9 Planning Commission Briefing Questions 17-49
5. September 9 Planning Commission Briefing Questions, Response Prepared by Loudoun County Public Schools
6. Fire First Due Area
7. EMS First Due Area
8. Applicant Response to Comments for Traffic Impact Study dated September 12, 2008

LOUDOUN COUNTY SCHOOLS – LENA H PROPERTY
SPEX 2008-0017, CMPT 2008-0007

CONCLUSIONS

1. The proposed Special Exception and Commission Permit for Middle School and High School use and associated accessory uses are consistent with the existing land use policies of the Revised General Plan (RGP) for the subject area (Transition Policy Area). Subject to the prescribed development conditions, the proposed special exception applications will be in accordance the RGP.
2. The application is in accordance with the Revised 1993 Zoning Ordinance.
3. The special exception application proposes intersection improvements (Route 50/Lenah Road) and improvements to existing road networks which will assist in the implementation of the Revised Countywide Transportation Plan; however, the timing, extent and coordination of these improvements with other triggered road improvements in the area (Braddock Road) requires further discussion.
4. Subject to the prescribed stormwater management, well monitoring and tree conservation measures, the application preserves appropriate environmental resources on the Property. The proposal will minimize impacts on state waters and wetlands.

LOUDOUN COUNTY SCHOOLS – LENAH PROPERTY
SPEX 2008-0017

CONDITIONS OF APPROVAL

September 23, 2008

1. **Substantial Conformance.** The High School and Middle School use and associated recreational facilities shall be developed in substantial conformance with Sheet 1, Sheet 3, and Sheet 5 of the Loudoun Co. Public Schools Lenah Road Property Commission Permit and Special Exception Plat, prepared by Bowman Consulting Group, Ltd. dated February 14, 2008, revised through September 3, 2008 (the "Plat") and the Revised 1993 Loudoun County Zoning Ordinance (the "Zoning Ordinance"). Approval of this application does not relieve the Applicant of any Zoning Ordinance, Codified Ordinance, or any other regulatory requirement. As used in these conditions, "Applicant" includes the owners of the property subject to the Special Exception approval, its successor, and parties developing, establishing or operating any of the approved Special Exception uses.
2. **Uses Permitted.** Approval of the Special Exception grants approval for a Middle School use, High School use, accessory uses and associated recreational facilities, as defined by the Revised 1993 Loudoun County Zoning Ordinance, in the TR1UBF (Transitional Residential -1) Zoning District. The cumulative total of the Middle School and High School uses, exclusive of accessory uses and recreational facilities, shall not exceed 460,000 square feet.
3. **Lot Consolidation / Boundary Line Adjustment.** Lot consolidation and/or a boundary line adjustment to create the subject Property as illustrated on Sheet 2 of the Plat shall be required prior to or in conjunction with first site plan approval for the Property.
4. **Public Utilities.** ~~The Applicant shall extend~~ Public utilities shall be extended to the Property at no cost to the County.
5. **Use of Recreational Facilities.** Playing fields associated with the School uses shall be permitted to be utilized by Parks, Recreation, and Community Services (PRCS) when not programmed for athletic competition and practice by Loudoun County Public Schools (LCPS).
6. **Lighting.** Site lighting shall conform to Section 5-1500 of the Revised 1993 Loudoun County Zoning Ordinance and Sections 7.110 and 7.120 of the Facilities Standards Manual (FSM). The following standards shall also apply:
 - a. **Light Fixtures.** Exterior building lighting and parking lot lighting shall be cut-off and fully shielded and shall direct light downwards and into the interior of the Property and away from surrounding public roads and properties. Low-pressure sodium lamps shall be prohibited.

- b. **Exterior Building Lighting.** Exterior building lighting associated with the Middle School, High School, and buildings for accessory uses, including security lighting, shall not exceed a maximum average illumination of five (5) foot-candles at grade level unless otherwise required by law, ordinance, or regulation.
 - c. **Parking Lot Lighting.** Parking lot lighting shall not exceed a maximum average illumination of two (2) foot-candles at grade level. Parking Lot Lighting shall be turned off within one hour following the end of evening activities, or by 11 p.m., whichever occurs first.
 - d. **Athletic Field Lighting.** Installation of Athletic Field Lighting shall be in accordance with Section 5-1504 of the Revised 1993 Loudoun County Zoning Ordinance and shall be limited to the stadium/track and high school baseball and softball fields. Such lighting shall be directed inward and downward toward the fields and shall incorporate a reflector technology system that directs light onto the field and minimizes glare and spillage onto adjacent residential uses. Athletic Field Lighting shall be turned off within one hour following the end of evening activities, or by 11 p.m., whichever occurs first.
 - e. **Height of Light Fixtures.** The mounting height of any exterior light fixture shall not exceed 20 feet, except for light poles for athletic fields, which shall not exceed 80 feet in height. Height shall be measured from the ground to the bottom of the light fixture.
7. **Noise.** Installation of the outdoor public address system shall be limited to the stadium/track and the High School baseball and softball fields. Noise emanating from the public address system shall not exceed 60 dBA at the property boundaries and use of the system shall be prohibited after 11 p.m.
8. **Transportation Improvements.** The following transportation improvements shall be open to traffic prior to, or in conjunction with the first occupancy permit for the Property unless otherwise noted.
- a. **Planned Lenah Loop Road / Lenah Connector.** A two-lane undivided roadway between Braddock Road (Route 620) and planned intersection of Tall Cedars Parkway in accordance with CPAP 2008-0060, Lenah Village Drive.
 - b. **Construction and Right of Way Easements – Planned Lenah Connector Road / Lenah Village Drive.** Dedication of right of way and construction easements along eastern Property frontage, as required, in conjunction with CPAP 2008-0060, Lenah Village Drive.
 - c. **Frontage Improvements – Existing Lenah Run Road.** Extend the two-lane undivided road section with associated turn lanes, as required, along northern Property frontage on Lenah Road (Route 600) from Lenah Run Circle to the western Property entrance.

- d. **Internal Road.** Private road between existing Lenah Road and planned Lenah Connector Road as illustrated on Sheet 3 of the Plat.
 - e. **Route 50 / Lenah Run Road Intersection.** Eastbound right turn, westbound left turn lane, northbound right turn lane and signalization at the intersection of John Mosby Highway (Route 50) / Lenah Road (Route 600).
 - f. **Trails.** A ten foot (10') wide bicycle and pedestrian trail along the northern Property frontage to Lenah Road (Route 600). The trail segment between the western Property boundary and western Property entrance will be constructed prior to or conjunction with the first occupancy permit for the High School use. The remaining segment associated with the realignment of Lenah Run Road to a T-intersection with the future Lenah Connector Road, as illustrated on Sheet 3 of the Plat, will be constructed by the Applicant at such a time as the road realignment is open to traffic.
9. **Buffering and Screening.** Enhanced yard buffers shall be provided in conformance with Sheet 3 of the Plat.
10. **Architectural Design Elements.** Middle School and High School building design shall avoid the use of continuous plane building surfaces and wherever practicable break up large building segments into smaller segments through the use of fenestration and setbacks. The Applicant shall incorporate the following design elements:
- a. **Classroom Areas.** Classroom areas shall contain double hung and sliding windows.
 - b. **Building Accent Materials.** School building accent materials shall include horizontal bands around the building to minimize the appearance of height.
 - c. **Roof Materials.** Roofing materials shall include a standing seam metal roofed canopy along the front of each School building to break up building facades and minimize the appearance of height.
11. **Stormwater Management.** The Applicant shall provide one or more Low-Impact Development (LID) design measures for the proposed High School, Middle School, and Bus Parking Facility and shall work with the County to implement measures deemed likely to be effective based on the physical characteristics of the Property. Such measures shall include, but shall not be limited to, bio-retention areas. LID measures will be designed and implemented in accordance with the adopted provisions of the Facilities Standards Manual (FSM). The Applicant shall also implement a turf management best practices program for fertilizer, pesticide and herbicide applications associated with the athletic fields and site maintenance.

12. **Wetland Mitigation.** For any wetland and stream impacts determined to be unavoidable in conjunction with the permitting process for development of the Property, the Applicant shall provide wetland mitigation in the following priority order: 1) onsite, 2) within the Broad Run Watershed within the same Loudoun County geographic Planning Policy Area, 3) within the Broad Run Watershed Area within another Loudoun County geographic Planning Policy Area, or 4) elsewhere within Loudoun County, subject to approval by the U.S. Army Corps of Engineers (Corps) and the Virginia Department of Environmental Quality (DEQ).
- ~~13. **Groundwater / Well Monitoring Program – Irrigation Wells.** The Applicant shall conduct a hydrogeological analysis for the proposed irrigation well including a groundwater/well monitoring program in accordance with Section 6.240 of the FSM. The monitoring plan will be designed to monitor for impact, if any, of the development of the Property on the adjacent groundwater supply wells, including those serving the Lenah Run community water system. The monitoring program will be made available to Loudoun Water/Loudoun County Sanitation Authority (LCSA) for review and comment. A copy of the approved monitoring program shall be provided to the County prior to or in conjunction with issuance of the first occupancy permit for the High School Use. The monitoring program shall specify the methodology, timing, and duration of monitoring to be performed as well as a remediation plan to address the impact, if any, of the development of the Property. The Applicant will work with the County to determine if the proposed irrigation well will be suitable for the County's monitoring program and, if so, will provide access to the County for water quality and water quantity testing. Irrigation wells established on the Property shall be used solely for the purpose of competition field maintenance associated with the High School use.~~
13. **Use of Existing Pond as SWM/BMP Facility.** If used as a Stormwater Management (SWM) / Best Management Practice (BMP) facility, the pond at the northwest corner of the subject parcel shall be designed to achieve at least 65-percent phosphorous removal efficiency, subject to the U.S. Corps of Engineers and Virginia Department of Environmental Quality review and approval.
14. **Energy Efficiency / Water Efficiency.** Development of the Middle school, High school, and accessory uses shall incorporate Energy Star Standards. All urinals and toilets associated with these uses shall use less water than that required by Table 604.4 of the International Plumbing Code, (i.e. 1.6 gallons per flush). ~~Waterless urinals shall be installed in all boy's and men's bathrooms prior to or in conjunction with the approval of the first occupancy permit for the Property.~~
15. **Bus Parking Facility - Oil / Water Separator.** Stormwater runoff from the Bus Parking Facility illustrated on Sheet 3 of the Plat shall be routed to one or more oil-water separator(s) for treatment prior release onto the Property.
16. **Tree Save Areas.** Within the areas identified on the Plat as "Tree Save Areas," the Applicant shall preserve healthy trees provided, however, that trees may be removed to the extent necessary for the construction of trails and Stormwater Management Facilities that are required pursuant to the Special Exception Conditions and/or shown on the approved construction plans and profiles as lying within such Tree Save Areas and for the construction

of utilities necessary for development of the Property. A minimum of eighty (80) percent of the canopy within the cumulative Tree Save Area depicted on the Plat will be preserved, exclusive of stands of Virginia Pine and Eastern Red Cedar over 25 years in age. In the event that the eighty (80) percent canopy threshold cannot be achieved within the designated Tree Save Areas, such lost canopy will be recaptured elsewhere on the Property in locations to be designated at the discretion of the Applicant in consultation with the County. Boundaries of all Tree Save Areas shall be delineated on the site plan for each phase of the development.

If, during construction on the Property, it is determined by the Applicant's certified arborist and/or the County that any healthy tree located within the boundaries of any of the Tree Save Areas has been damaged during construction and will not survive, then, the Applicant shall remove each such tree and replace each such tree with two (2) 2½ - 3 inch caliper native, non-invasive deciduous trees. The placement of the replacement trees shall be proximate to the area of each such damaged tree so removed, or in another area as requested by the County.

After construction has been completed by the Applicant, Forest Management Techniques, performed by or recommended by a professional forester or certified arborist, that are necessary to protect or enhance the viability of the canopy may be undertaken. Such Management Techniques may include, without limitation, pruning and the removal of vines, invasive species, trees uprooted or damaged by extreme weather conditions, and trees or limbs that are diseased, insect-infested, dead, or are considered a hazard to life or property. The site plan for each phase of the Property containing a Tree Save Area shall contain a note stating that the removal of trees within a Tree Save Area is prohibited except in accordance with the provisions outlined in this note.

**LOUDOUN COUNTY PUBLIC SCHOOLS – LENA H PROPERTY
SPEX 2008-0017, CMPT 2008-0007**

ADDITIONAL QUESTIONS RAISED AT THE 9/16/08 WORK SESSION

September 23, 2008 Planning Commission Work Session

(Prepared by Loudoun County Public Schools)

- 1. Provide the distance, cost and timing for the installation of the water main constructed by Greenvest along Braddock Road east of Route 659.**

Response: To be provided by Staff

- 2. Address the suggestion that waterline easements be dedicated up front prior to construction of the waterline.**

Response: With the waterline extension being entirely on-site, Loudoun Water can issue the construction permit prior to easement recordation, which will allow work to begin earlier than if easement recordation is required in advance. Loudoun Water will require the easement prior to placing the line in service and releasing the bond. As the Seller has a contractual obligation to provide water service, not just to build the water line, we believe sufficient delivery guarantee exists to make easement recordation prior to construction unnecessary.

- 3. Provide a breakdown of the Applicant's Traffic Distribution Map (i.e., provide the number of trips and identify areas from which they are generated).**

Response: The traffic analysis utilized student projections based on the school opening dates of 2010 and 2011. In order to illustrate the specific traffic distribution, the peak trip counts will be added to the planning zones and shown in relation to both the potential HS-7 service area and the planned land use designations. This exhibit will be available at the September 23, 2008, work session.

- 4. Provide the current class sizes for Freedom High School and Mercer Middle School.**

Response: Class sizes at middle and high schools generally meet the School Board targets of 22.6 and 26.6, respectively. Not just at these two schools, but throughout all LCPS middle and high schools there may some classes that may have a few as 15 students, while others may have 30 students. Class size in secondary schools is driven by how the students sign up for the classes and the licensure of the teachers. Freedom and Mercer have both been staffed on the same ratios used at other secondary schools. It should be noted that students (51 as of 9/19/08) that would normally attend Mercer are being overflowed to Stone Hill. This interim solution will not last as growth continues in the Freedom and Briar Woods high school cluster service areas.

- 5. Identify the number of students walking to Freedom High School and Mercer Middle School .**

Response: There are currently no walk zones at Freedom or Mercer due to construction activity in the area of these schools. When schools are build in areas of active construction, walk zones are established after construction is substantially complete to provide a safe environment. It is anticipated that walk

zones will be established for the 2009-10 school year. It is noted that even though Freedom High School does not presently have a walk zone, Freedom High School staff estimate that 60-70 students walk to school on a daily basis.

Middle and High School Students living within one mile of the school with available, safe walking routes will be included in the walk zone. LCPS staff physically verifies the walk zone ensuring continuous sidewalk/trail connections, no 4 lane highway crossings, safe crosswalks and similar safety measures.

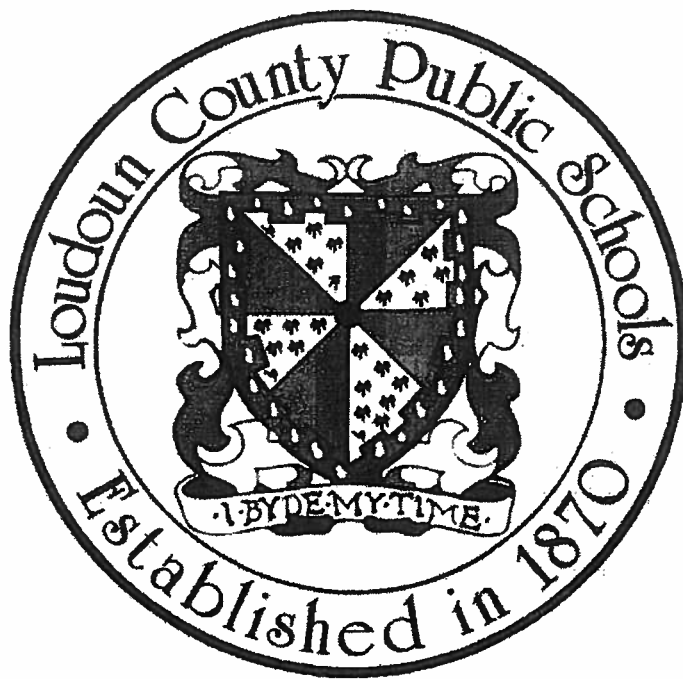
6. How is programming determined?

Response: Building programming capacities are outlined in the School Board Adopted CIP, please reference the excerpt from the FY2009-FY2014, attached.

7. Would the seller be willing to renegotiate the price of the land?

Response: No.

**SCHOOL BOARD ADOPTED
FY 2009 THROUGH FY 2014
CAPITAL IMPROVEMENT PROGRAM**



LOUDOUN COUNTY PUBLIC SCHOOLS

JANUARY 10, 2008

FACILITY ANALYSIS

The following sections provide information on individual school facilities, organized by the high school cluster in which each school is located. The information includes:

Location of Cluster Facilities:

The general location of school facilities within the high school cluster are illustrated on an area map.

It should be noted that some schools advance students to more than one school in the same or different high school cluster area. The school cluster assignment reflects the physical location of the school with respect to high school attendance boundaries. This FY 2009 CIP includes a new high school cluster, Woodgrove High School Cluster, which has been created from the former Loudoun Valley and Loudoun County High School cluster areas.

Building Program Capacities:

Building program capacity is determined annually for each school based on the current instructional programs and room usage. Certain classrooms and other usable areas assigned to mandated resource and/or regional programs (e.g., Title 1, English as a Second Language) are not available for tabulation in program capacity. Further, designated computer laboratories are not included in program capacity calculations. All other classrooms which are not used for such identified programs are included in a school's capacity calculation.

As new schools open, and programs are placed in the new facilities, program capacity is calculated annually based on the instructional programs and room usage. As endorsed by the Loudoun County School Board, high school program capacity for new facilities (unless otherwise noted) will be 1,800 students. Middle school program capacity, beginning with Stone Hill Middle School which opened this September 2007, will be 1,350 students. New elementary school facilities will be built with a planned 875 student program capacity.

At the secondary school level, building program capacity is 90 percent of the number of rooms multiplied by their corresponding capacity rating. The 90 percent factor permits variances in scheduling and class size requirements.

Grades 6 - 8:

19 students (90% of 21 students)

Grades 9 - 12:

21 students (90% of 23 students)

The one exception to the stated secondary standard is in the Park View cluster. Based on academic and instructional goals, student-teacher ratios and planned staffing at both Sterling Middle School and Park View High School are calculated at a rating of 85 percent. Accordingly, the classrooms at Sterling Middle School

reflect a program capacity of 18 students per room (85 percent of 21 students). Park View High School reflects a capacity of 20 students per classroom (85 percent of 23 students).

At the elementary school level, building program capacity is currently obtained by multiplying the capacity of each available classroom by the designated number of classrooms:

Kindergarten:

44 students (two sessions per day, per classroom)

At schools where the building does not have sufficient classroom space to offer two classes at each grade level, kindergarten capacity is reduced by half to 22 students.

Grades 1 - 5:

23 students

Self-Contained Special Education/Preschool:

10 students

STEP (Stepping Toward Excellence in Preschool):

30 students (two sessions per day, per classroom)

Head Start:

17 students

There are two exceptions to the above referenced elementary capacity calculations. The first exception is for the elementary schools within the Park View cluster area (Forest Grove, Guilford, Rolling Ridge, Sterling, and Sully Elementary Schools) and Sugarland Elementary School. Based on student-teacher ratios and planned staffing goals, the grade one through grade five regular education classrooms are calculated by multiplying the number of designated classrooms by 19 students - instead of the typical 23 student rating. Additionally, the kindergarten capacity is calculated based on 36 students, instead of the typical 44 students per classroom.

The second exception references the eight elementary schools currently piloting the full day kindergarten program - Cedar Lane, Cool Spring, Countryside, Newton-Lee, Round Hill, Sugarland, Sully, and Sycolin Creek Elementary Schools. At these identified schools, the classrooms being utilized for the full day kindergarten program are included in the grade one through grade five classroom count. The classrooms utilized for the full day kindergarten program at Sugarland Elementary (one classroom) and Sully Elementary (two classrooms) reflect a capacity rating of 19 students per room (again, reflecting the modified capacity noted in the previous paragraph). The remaining identified schools each have one classroom dedicated to this program, these kindergarten rooms reflect a capacity rating of 23 students per room.

School Facilities:

Data specific to the physical condition of each school is provided, including site location, year of original construction, subsequent facility upgrades, and acreage.

Information illustrating the facilities' overall enrollment (actual September 28, 2007 and projected enrollment for the next six years) and utilization measures whether a specific school is overcrowded or has available capacity.

Planning considerations for the schools are discussed and include specific recommendations to correct problems for individual schools. Recommendations may include, but are not restricted to school attendance boundary changes, additions/renovations to existing facilities, and/or the construction of new school facilities. Such recommendations may involve schools within other high school clusters.

Enrollment Summary:

While data for each individual school are provided on the respective facility page, an overview of the projected student enrollments for the entire high school cluster is provided. Projected student enrollments are only provided for schools which have adopted attendance boundaries.

2007-08 BUILDING PROGRAM CAPACITIES: FREEDOM HIGH SCHOOL CLUSTER

Secondary School	Total Classrooms Excludes Computer Labs			Mandated Services Not Available for Program Capacity				Available Classrooms (90% Utilization Rate)			2007-08 Building Program Capacity
	Regular Size Classrooms (R)	Regular Size Classrooms - Trailers (R)	Special Size Classrooms (S)	LD Resource	English as a Second Language (ESL)	Middle School Gifted (SPECTRUM)	In School Restriction (ISR)	Regular Size Classroom (HS @ 23 / MS @ 21)	Regular Size Classroom - Special Use @ 10	Special Size Classroom @ 10	
Freedom HS	79	0	4	*	1R/2S	0R	1S	76R	2R	1S	1600
Mercer MS	60	0	8	*	1R	*	*	59R	0R	8S	1187

* Area other than a classroom used for program

	Total Classrooms			Mandated Services				Classrooms							
	Excludes Computer Labs			Not Available for Program Capacity				Available for Program Capacity							
Elementary School	Regular Size Classrooms (R)	Regular Size Classrooms - Trailers (R)	Special Size Classrooms (S)	Art/Music	Speech/LD Resource/Reading Resource	Title 1	English as a Second Language (ESL)/Gifted (FUTURA)	Head Start (HS) @ 17	Starting Towards Excellence in Preschool (STEP) @ 30	Early Childhood Special Education (ESCE) @ 10	Early Childhood Special Education (ESCE) @ 20	Special Education (SP) @ 10	Kindergarten (K) @ 44	Grades 1-5 @ 23	2007-08 Building Program Capacity
Aldie ES	6	0	0	*	*	0R	0R	0R	0R	0R	0R	0R	5R	5R	137
Arcola ES	43	0	0	3R	*	0R	3R	0R	0R	0R	2R	6R	2R	27R	809
Hutchison Farm ES	37	0	2	3R	*	0R	3R	0R	0R	0R	0R	2S	4R	27R	817
Little River ES	39	0	0	3R	*	0R	3R	0R	0R	0R	0R	2R	4R	27R	817
Pinebrook ES	43	0	0	3R	*	0R	4R	0R	0R	0R	1R	5R	3R	27R	823

* Area other than a classroom used for program

NOTE: Staff has organized the Planning Commission's questions regarding the LCPS - Lenah Property application into multiple topic areas to help facilitate the Commission's discussion of the application. These questions were identified by Commission at the September 9, 2008, Planning Commission worksession. Questions regarding Utilities and General Plan policy were discussed at the September 16, 2008, Planning Commission worksession. The following questions are the balance of Commissioner questions identified at the September 9, 2008, worksession. Follow-on utilities and General Plan policy questions from the September 16, 2008, Planning Commission worksession are listed separately.

TRANSPORTATION

17. What is the existing Level of Service (LOS) on Route 50 and Braddock Road (Braddock Road from border with Fairfax County)? What is the projected LOS of by-right development with and without the schools?
18. What is the cost of Applicant's proposed and required transportation improvements?
19. What are the proffered improvements to Lenah Rd, Braddock Rd and Rt 50? What is the design of these roads (CTP standards)? Does the planned limited access design for Route 50 apply?
20. Provide a single map showing surrounding road network and identifying status of planned improvements. Identify who is to pay, when is the improvement is triggered, proffer vs. by-right requirement, etc.
21. What is impact of schools on peak hour traffic?
22. Why was a roundabout not proposed or required?
23. Describe where all the trips to the school are coming from.
24. How will flooding be alleviated on surrounding roads? (Lenah Road was flooded with recent storm)
25. How will a future roundabout improve safety? Will traffic be able to get onto Route 50?
26. British Pantry has no defined curbs or entrances. What will be done to prevent cut through traffic using the Pantry driveway to avoid a light?
27. What is length of frontage of the Westport Subdivision on Braddock Road. What is timeline for construction?
28. How much of the Lenah Connector / Lenah Loop Road will be in place when schools are built? How will the road be completed and when?
29. What assurances are provided that road improvements will be constructed in time for schools?

SCHOOL-SPECIFIC

30. When did schools evaluate the alternative sites identified in the Statement of Justification?
31. Is there an escape clause and a settlement date in the School Board's purchase agreement?
32. Will an activities bus be provided?

DESIGN

SPEX 2008-0017, CMPT 2008-0007
LOUDOUN COUNTY PUBLIC SCHOOLS – LENAHA PROPERTY
PLANNING COMMISSION BRIEFING QUESTIONS
September 23, 2008 Planning Commission Worksession

33. Identify pervious and impervious areas of the site. Where pervious construction materials (pavement, blocks...) are requested, describe the materials.
34. Where do bus drivers park their cars?
35. Why no artificial turf for the athletic fields?
36. Any Karst soils on the site?
37. What is a situation on the site where a wetland impact cannot be avoided?
38. What is light and noise impact on neighbors? Are existing and future light and noise levels known? Can the strategy used by the Play-to-Win project be applied?
39. Compare ambient lighting with projected impacts.
40. Staff report states project will not negatively impact wildlife habitat. What habitat exists on the property and how will it be impacted?

BUFFERS

41. West boundary buffer – delineate the property line relative to the buffer. Is any of the illustrated buffer (on the plat) on the adjoining property? Will the buffer on the property meet standards?
42. Provide an illustrative explaining the different types of buffers and when they are required.
43. Is there an alternative to a long, straight berm along northern property line?

FIRE-RESCUE

44. What is the first response station and what is anticipated response time?
45. What are the Fire-Rescue Levels of Service? Have they been met for the site?
46. Provide service map used by Fire-Rescue

MISCELLANEOUS / PROCEDURAL

47. Application is subject to SBPL 2008-0002 – what is status of preliminary and record plats? What is the relationship of the SBPL to the SPEX?
48. Why is the archaeological survey not up to standards?
49. How will a new school increase the County's tax base?

**LOUDOUN COUNTY PUBLIC SCHOOLS – LENAH PROPERTY
SPEX 2008-0017, CMPT 2008-0007**

**PLANNING COMMISSION BRIEFING QUESTIONS
September 23, 2008 Planning Commission Work Session
(Responses Prepared by Loudoun County Public Schools)**

NOTE: Staff has organized the Planning Commission's questions regarding the LCPS - Lenah Property application into multiple topic areas to help facilitate the Commission's discussion of the application. These questions were identified by Commission at the September 9, 2008, Planning Commission work session. Questions regarding Utilities and Comprehensive Plan policy were discussed at the September 16, 2008, Planning Commission work session. The following questions are the balance of Commission's questions identified at the September 9, 2008, work session. Follow-up utilities and Comprehensive Plan policy questions from the September 16, 2008, Planning Commission work session are listed separately.

TRANSPORTATION

- 17. What is the existing Level of Service (LOS) on Route 50 and Braddock Road (Braddock Road from border with Fairfax County)? What is the projected LOS of by-right development with and without the schools?**

Response: The traffic study submitted for the Lenah School development analyzed the level of service for the intersection of Route 50 with Lenah Road and Braddock Road with Lenah Road. The analysis presented in the study reveals that the intersection of Route 50 and Lenah Road operates under unacceptable levels of service conditions under the existing conditions. The side street (Lenah Road) traffic operates at level of service E. The intersection of Braddock Road and Lenah Road operates under acceptable levels of service conditions (LOS A, with a delay of less than 10 seconds for all approaches). The existing section of Braddock Road from Gum Spring Road to Lenah Road carries less than 100 peak hour trips (total of both directions) and the section from Gum Spring Road to the Fairfax County Line carries approximately 500 peak hour trips (total of both directions). The Highway Capacity Manual (HCM 2000) states that '*a capacity of a two-lane highway is 1,700 vehicles per hour for each direction of travel*'. The existing peak hour traffic along Braddock Road is clearly below capacity and hence has an acceptable LOS.

As stated above, the intersection of Route 50 and Lenah Road operates at unacceptable levels of service. In case of the by-right development, no off-site roadway improvements are required, and hence no improvements are planned or proposed at the intersection of Route 50 and Lenah Road. With the construction of the by-right development without the schools, the intersection of Route 50 and Lenah Road will continue to operate at unacceptable levels of service. LCPS has proposed a traffic signal and a left turn bay in the westbound direction at the intersection of Route 50 and Lenah Road; the analysis presented in the traffic study shows that the intersection will operate at acceptable levels of service with the school traffic and the traffic from the by-right development. Also, as stated above, the intersection of Braddock Road and Lenah Road operates at LOS A under existing conditions. With the addition of school traffic and the by-right development, the intersection will operate at LOS B (with a delay of less than 15 seconds).

18. What is the cost of Applicant's proposed and required transportation improvements?

Response:

The purchase of the proposed school site will include:

- Construction of two lane Lenah Connector Road extending from Braddock Road to, and including, the entrance at the south-east corner of the Property (the School's southern access) which is to be constructed prior to the opening of MS-5; and
- Construction of a two lane Lenah Connector Road extending from the school's southern access to the north east corner of the school site, including the realignment and T intersection with existing Lenah Road which is to be constructed within 14 months of the transfer of the 350th residential lot to a third party.

These improvements include any turn lanes that may be required, sidewalks or trails, and the vacation of the segment of existing Lenah Road that will no longer be utilized once the realignment has been reconstructed. (Also reference Question 2 Response September 16 Work Session)

As a part of the school construction, LCPS proposes to:

- Extend the two lane section of Existing Lenah Road to the Western Site Entrance/ \$710,000;
- Install a traffic signal at the intersection of Lenah Road and Rt. 50/\$250,000; and
- Construct a Westbound left turn lane on Route 50/\$360,000-560,000
- Roadway striping, Maintenance of Traffic Plan, and 20% contingency for Rt. 50 work/\$136,400

The estimated cost of these improvements is \$1.46-\$1.66 million.

The conditions recommended in the staff report dated September 10, 2008, provide for:

- Northbound Right Turn Lane at Lenah Road and Route 50
- Eastbound Right Turn Lane at Lenah Road and Route 50

Should these improvements be required, the estimated construction cost of these improvements is \$230,000. The right-of-way acquisition costs are not known.

The staff report dated September 10, 2008, identifies outstanding transportation issues to be discussed related to 1) the Route 50/Lenah Road Intersection Improvements, 2) the phasing and extent of transportation improvements on Braddock Road and 3) VDOT recommendations for additional lane improvements to the Lenah Connector Road and a monetary contribution toward the intersection of Braddock Road and the planned Lenah Loop Road.

On September 16, 2008, the applicant, VDOT and OTS met to review more detailed traffic analysis provided in response to the August 27, 2008 VDOT comments. Additional referral comments from VDOT and OTS are anticipated. An update is to be provided at the September 23, 2008, work session.

19. What are the proffered improvements to Lenah Rd, Braddock Rd and Rt 50? What is the design of these roads (CTP standards)? Does the planned limited access design for Route 50 apply?

Response: The applicant understands this question to be for Lenah Road, Braddock Road and Route 50 within the vicinity of the proposed school site. There are no proffers associated with Lenah Road or the intersection of Lenah Road with Route 50. The improvements proposed in relation to this Special Exception are outlined above in Question 18. With regard to Braddock Road, please reference **Exhibit 1** which identifies the proffered and by-right Braddock Road frontage improvements beginning at the unpaved portion of Braddock Road east of the site (At Kirkpatrick Farms/Greenfield Crossing) and ending at the Lenah Property.

CTP Standards: (taken from May 25, 2007 draft CTP)

- Route 50 - from Route 659 Relocated (North Star Boulevard) to Lenah Loop Road is designated as a four-lane median divided controlled access minor arterial. (limited access does not apply)
- Route 50 from Lenah Loop Road to Village of Aldie is designated as a two-lane undivided rural arterial. (limited access does not apply)
- Lenah Connector Road from Route 50 to Tall Cedars Parkway is designated as a four lane undivided rural collector.
- Lenah Loop Road from Tall Cedars Parkway to Braddock Road is designated as a two lane undivided rural collector.
- Braddock Road from Route 659 relocated to Route 600 (new Lenah Loop Road) is designated as four lane undivided rural collector.

20. Provide a single map showing surrounding road network and identifying status of planned improvements. Identify who is to pay, when is the improvement is triggered, proffer vs. by-right requirement, etc.

Response: The requested map will be available at the September 23, 2008, work session. The detail requested requires substantial preparation time.

21. What is impact of schools on peak hour traffic?

Response: Traffic counts reveal that the peak hour of adjacent street traffic is between 7:00 to 8:00 in the AM peak period and 4:45 to 5:45 in the PM peak period, whereas the peak hour for the School traffic is between 8:00 to 9:00 AM and 4:00 to 5:00 PM. It is anticipated that less than 20% of the school traffic will impact the commuter peak traffic in the AM and less than 30% of the school traffic will impact the commuter peak traffic in the PM. The analysis presented in the traffic study dated February 15, 2008, shows the proposed frontage and off-site improvements proposed by LCPS more than mitigate the impacts from the school generated traffic but also help alleviate some of the regional traffic issues.

22. Why was a roundabout not proposed or required?

Response: A one-lane roundabout was proposed at the intersection of Route 50 and Lenah Road intersection as part of the Route 50 calming project. However, due to unavailability of funds, the

proposed roundabout is no longer a part of the Route 50 traffic-calming project. As part of the traffic study, a single lane roundabout analysis was conducted at the intersection of Route 50 and Lenah Road for future conditions without the school traffic. The analysis revealed that a single lane roundabout is not capable of handling the projected traffic (2010) at the intersection of Route 50 and Lenah Road without the school traffic and does not meet the acceptable levels of service criteria. The improvements proffered by Loudoun County Public Schools, which include a signal, and a westbound left turn lane provide additional capacity and operational benefits at this intersection. The improvements proposed at this intersection also achieve acceptable levels of service, which is a requirement per Loudoun County's Facilities Standards Manual. In addition, the traffic signal and the westbound left turn bay can be implemented with minimal to no right of way requirements. The signal and westbound left turn bay do not preclude the construction of the roundabout, should the County wish to implement a roundabout in the future.

23. Describe where all the trips to the school are coming from.

Response: Prior to the scoping meeting for Lenah schools traffic study, the Loudoun County Public Schools Planning Department evaluated the potential service area for the MS-5 and HS-7 schools on Lenah property. This potential service area became the transportation study area for the purposes of evaluating the traffic distribution. The School study area was divided by planning zones and student population from each zone anticipated to attend the middle school (MS 5) and high school (HS 7) was assigned. The student population data from each zone was then translated into the anticipated direction of approach (DOA) for the school-generated traffic. Figure 12 from the traffic study dated February 15, 2008 shows the distribution of trips (school generated traffic) and is attached at **Exhibit 2**.

24. How will flooding be alleviated on surrounding roads? (Lenah Road was flooded with recent storm)

Response: The applicant's engineer contacted the VDOT Arcola Maintenance Facility to inquire about flooding during the recent area storms associated with Hurricane Hanna . The only area the VDOT staff identified was the area at the culvert under Lenah Road to the north of the existing pond. During design of the high school site plan LCPS will evaluate the site with respect to all applicable storm water management regulations and practices and address any flooding issues that may be related to the school site.

25. How will a future roundabout improve safety? Will traffic be able to get onto Route 50?

Response: As noted in the response for comment # 22, the one lane roundabout will operate at unacceptable levels of service under future conditions without the school traffic. Hence, operationally the proposed roundabout at the intersection of Route 50 and Lenah Road will not operate differently from the existing unsignalized intersection at Route 50 and Lenah Road. LCPS has proposed a traffic signal and a westbound left turn lane at the intersection of Route 50 and Lenah Road. The analysis

presented in the traffic study shows that the improvements proposed by LCPS at Route 50 and Lenah Road will more than mitigate the impacts from the proposed school traffic and also help alleviate an existing and regional traffic problem.

26. British Pantry has no defined curbs or entrances. What will be done to prevent cut through traffic using the Pantry driveway to avoid a light?

Response: Presently the British Pantry has wheel stops along the Route 50 frontage which prevents traffic from cutting across their parking lot to reach existing Lenah Road.

27. What is length of frontage of the Westport Subdivision on Braddock Road. What is timeline for construction?

Response: The Westport Subdivision frontage on Braddock Road is approximately 2,500 feet. The timeline for this improvement is not known. Westport has an approved preliminary subdivision (SBPL 2006-0040) for 958 residential units. Construction plans and profiles (CPAP 2005-0019) have been approved. The Westport property also has a pending rezoning (ZMAP 2005-0030).

28. How much of the Lenah Connector / Lenah Loop Road will be in place when schools are built? How will the road be completed and when?

Response: Please refer to Questions 2 and 9 responses from the September 16, 2008, Work Session and Question 17 response above.

29. What assurances are provided that road improvements will be constructed in time for schools?

Response: Please refer to Question 9 response from the September 16, 2008, Work Session.

SCHOOL-SPECIFIC

30. When did schools evaluate the alternative sites identified in the Statement of Justification?

Response: In the Background Section (pages 1-3) of the Statement of Justification (last dated August 5, 2008) and as an attachment to the Statement of Justification, LCPS identified the various land options explored for MS-5 and/or HS-7. The following is a listing of those properties with the associated time of evaluation:

ZMAP 2005-0005, Braddock South Village: March 2005 - September 2006

ZMAP 2005-0001, Seven Hills: September 2006 -January 2007

Nicholas/Farkas/Crerar: April 2007-March 2008

Greenfields: February 2007-October 2007

Mattare/Moon Glade Farm: April-May 2008

Rohr/Funkhouser/Loudoun Kline Southern: April-May 2008

31. Is there an escape clause and a settlement date in the School Board's purchase agreement?

Response: The contract does not include an "escape" clause. The contract provides for a study period of 120 days commencing on the date of full execution of the contract. The contract was fully executed on July 2, 2008, and the study period expires on October 29, 2008. The Buyer may terminate within the study period if the Buyer determines that the property is not suitable for the intended use. The contract provides that both the seller and the buyer will in good faith pursue their respective approvals for the proposed school use. The contract specifies default provisions for either buyer or seller default.

The settlement date, or closing, is to be held within thirty days of the satisfaction of the conditions precedent to closing, (Also Reference Question 9 Response from the September 16, 2008 Work Session).

32. Will an activities bus be provided?

Response: Yes, activity bus service is provided. High schools in Loudoun County are provided with an early, 1 hour after school dismissal, and a late, 2.5 hours after school dismissal, activity bus service. This is usually provided by 2 buses for each service and returns students to their home region. Both services are used to support students participating in after-school activities such as remedial study, athletics, club participation, research, etc.

Middle Schools in Loudoun County are provided 1 activity bus service usually departing the school 1 hour after school dismissal. This is regional service only providing transportation to the student's home area. This service supports students participating in after-school activities such as remedial study, club activities, special projects, and research.

DESIGN

33. Identify pervious and impervious areas of the site. Where pervious construction materials (pavement, blocks...) are requested, describe the materials.

Response: In the August 15, 2008, ERT referral staff recommended the consideration of permeable parking surfaces for the bus parking area near the northern project boundary (north of the middle school) and for general parking area for the middle school. LCPS met with ERT staff on August 28, 2008, to review the ERT recommendations. The soils associated with the planned parking areas at the middle school are not conducive to pervious pavement application. However, LCPS did concur with the staff recommendation to incorporate bioretention basins to provide enhanced water quality and to meet the goals for water recharge as recommended by staff. On-site soils were examined to locate appropriate areas for bioretention which is a preferred solution from a first cost and maintenance perspective.

LCPS also has concerns regarding the long term performance of permeable parking in high traffic areas. The increased construction costs and long term maintenance of this type of pavement are not compatible with the current budget guidelines. LCPS has implemented pervious parking areas at Freedom high

school using paving blocks. The parking area is a very low traffic area. The cost for the paving block surface is approximately twice the cost of an asphalt lot. Pervious parking areas have also been utilized at the School Administration building. Repairs were required within the first year. The Belmont Station Elementary School is another location and reinforced turf was utilized. This material is no-functional after rain event.

An exhibit of the pervious and impervious areas of the site has been prepared for the Commission's information. Approximately 75% of the site is pervious. Of the 25% impervious, approximately 20% is rooftops and 80% is pavement/sidewalks. It is estimated that 40% of the rooftop drainage will go to bioretention areas and approximately 30% of the parking surface will go to bioretention areas. Please **Exhibit 3.**

34. Where do bus drivers park their cars?

Response: There is a car parking area within the bus parking facility for the bus drivers as well as additional parking, if needed, across the internal street at the high school. Typically as buses rotate in and out of the bus parking area, drivers will park in the bus spaces and rotate out again as the bus loads are completed. (Not all drivers/buses arrive and depart at the same time).

35. Why no artificial turf for the athletic fields?

Response: The Department for Construction Services and the Department of Instruction, Athletic are currently evaluating the cost benefit analysis of utilizing artificial turf on the stadium playing field. There are many considerations such as first cost, maintenance costs, replacement costs and student athlete health. As the data is gathered and analyzed, further consideration will be given to this subject in conjunction with the construction and maintenance budgets.

36. Any Karst soils on the site?

Response: Karst soils are specific to areas of irregular limestone. The subject property does not fall within the Limestone Overlay District. Further, based on the Loudoun County Soil Mapping data the site contains no limestone soil types.

37. What is a situation on the site where a wetland impact can not be avoided?

Response: Below the existing pond at the baseball field there will be a minor encroachment into the on-site wetlands. Appropriate permits will be secured through the Corps of Engineers and wetland impact will be mitigated in the priority order recommended by staff. (SPEX Recommended Condition #12)

38. What is light and noise impact on neighbors? Are existing and future light and noise levels known? Can the strategy used by the Play-to-Win project be applied?

Response: The County Zoning Ordinance provides standards for acceptable light and noise levels. The proposed school use will comply with the County requirements. Lighting will be cutoff and shielded,

directed inward and downward toward the interior of the property. The applicant will also comply with the proposed Special Exception Conditions (#'s 6 and 7) regulating lighting and the public address system utilized with the competition fields. There are ten existing high schools in Loudoun County. Freedom and Briar Woods High Schools are the newest facilities and would provide the best examples of implemented modern lighting technology. The existing high schools would also offer an understanding of the noise levels associated with the proposed use. LCPS has not commissioned a noise study.

39. Compare ambient lighting with projected impacts.

Response: Please refer to Question 38 response above.

40. Staff report states project will not negatively impact wildlife habitat. What habitat exists on the property and how will it be impacted?

Response: The Statement of Justification for the proposed school use states that there will be no damage to protected animal habitat or rare and endangered plant and animal species. Development activities will change the natural landscape. The property has been farmed for a number of years and is a combination of open farm fields and tree cover areas. The site was only evaluated for threatened, rare and/or endangered plant and animal life. A comprehensive wildlife habitat has not been undertaken, nor is it required.

BUFFERS

41. West boundary buffer – delineate the property line relative to the buffer. Is any of the illustrated buffer (on the plat) on the adjoining property? Will the buffer on the property meet standards?

Response: A Type II Side Buffer is required along the western property boundary. The Type II Side Buffer standard provides for a width of 20 foot minimum and 30 foot maximum with two canopy trees, 4 understory trees, 10 shrubs, and 2 evergreen trees per 100 linear feet. An enhanced Type II Side Buffer is proposed along the majority of the western boundary. The enhanced planting provides for 7 additional evergreen trees and 2 additional canopy trees per 100 linear feet. LCPS has met with the owners of MCPI 287-46-9040 to discuss their concerns for the proposed application and to provide additional landscaping between the school and the single family home use. The owners expressed a desire to keep the existing vegetation in order to retain mature landscaping (instead of having the enhanced Type II buffer) and expressed a desire to have a greater buffer width. Given the layout of the proposed fields, LCPS offered to provide additional landscaping on the owner's property. There will be a 25 foot in width Type II buffer on the school property which will meet the required buffering standards. In addition, LCPS has agreed to plant a double row of Leyland Cypress on the west side of the common boundary (on MCPI 287-46-9040), providing a substantial buffer and exceeding the buffering requirements. Please reference **Exhibit 4**.

42. Provide an illustrative explaining the different types of buffers and when they are required.

Response: Table 5-1414(A) of the Zoning Ordinance regulates the type of buffer required between land uses. Table 5-1414(B) describes the required plantings for each buffer type. These two tables along with an illustrative depicting the differences between these buffer types is included at **Exhibit 5**.

43. Is there an alternative to a long, straight berm along northern property line?

Response: LCPS agrees that the berm along Lenah Road, across from the Lenah Run community, should not be a long, straight, continuous berm. Instead, the proposed berm has been designed to provide a natural aesthetic presentation using staggered berming and plantings of native species. Areas of bioretention and infiltration have been incorporated. Please reference **Exhibit 6**.

FIRE-RESCUE

Questions 44-46 are to be addressed by staff.

44. What is the first response station and what is anticipated response time?

45. What are the Fire-Rescue Levels of Service? Have they been met for the site?

46. Provide service map used by Fire-Rescue

MISCELLANEOUS / PROCEDURAL

**47. Application is subject to SBPL 2008-0002 – what is status of preliminary and record plats?
What is the relationship of the SBPL to the SPEX?**

Response: The seller has filed a preliminary subdivision plan (SBPL 2008-0002) to revise the previously approved preliminary subdivision plan (SBPL 2005-0044) to incorporate the proposed school site. SBPL 2008-0002 was filed in April 2008. The plan has received the first round of referral comments and is on second review with a comment due date of October 29, 2008. It is anticipated that SBPL 2008-0002 will be approved by year's end. The proposed lot will be created by a Boundary Line Adjustment from existing lots of record pursuant to BLAD 2008-0054, which was filed in June 2008, and which is also expected to be approved by year's end. Creation of the lot is needed in order to transfer the property, approve the site plan, and, ultimately, to construct the schools. The lot may be created by either a record plat pursuant to SBPL 2008-0002 or by a boundary line adjustment (BLAD 2008-0054). In this case, the BLAD will be the process to create the school lot.

48. Why is the archaeological survey not up to standards?

Response: The Phase I Archaeological Survey prepared by Thunderbird Archeology in July 2008 complies with archaeological survey standards.. The initial Phase I Archaeological Report filed with the application submission did not test the site in accord with Virginia Department of Historic Resources Guidelines (VDHR). The first referral comments received from County Staff identified these deficiencies. LCPS subsequently met with County Staff and contracted with a different archaeological firm to conduct the required survey. A new Phase I Archaeological Report was filed, reviewed and

approved by the County. In the August 5, 2008, referral the staff recommendation "*concur with the finding of the report and agrees that no further archaeological work is warranted for this application*".

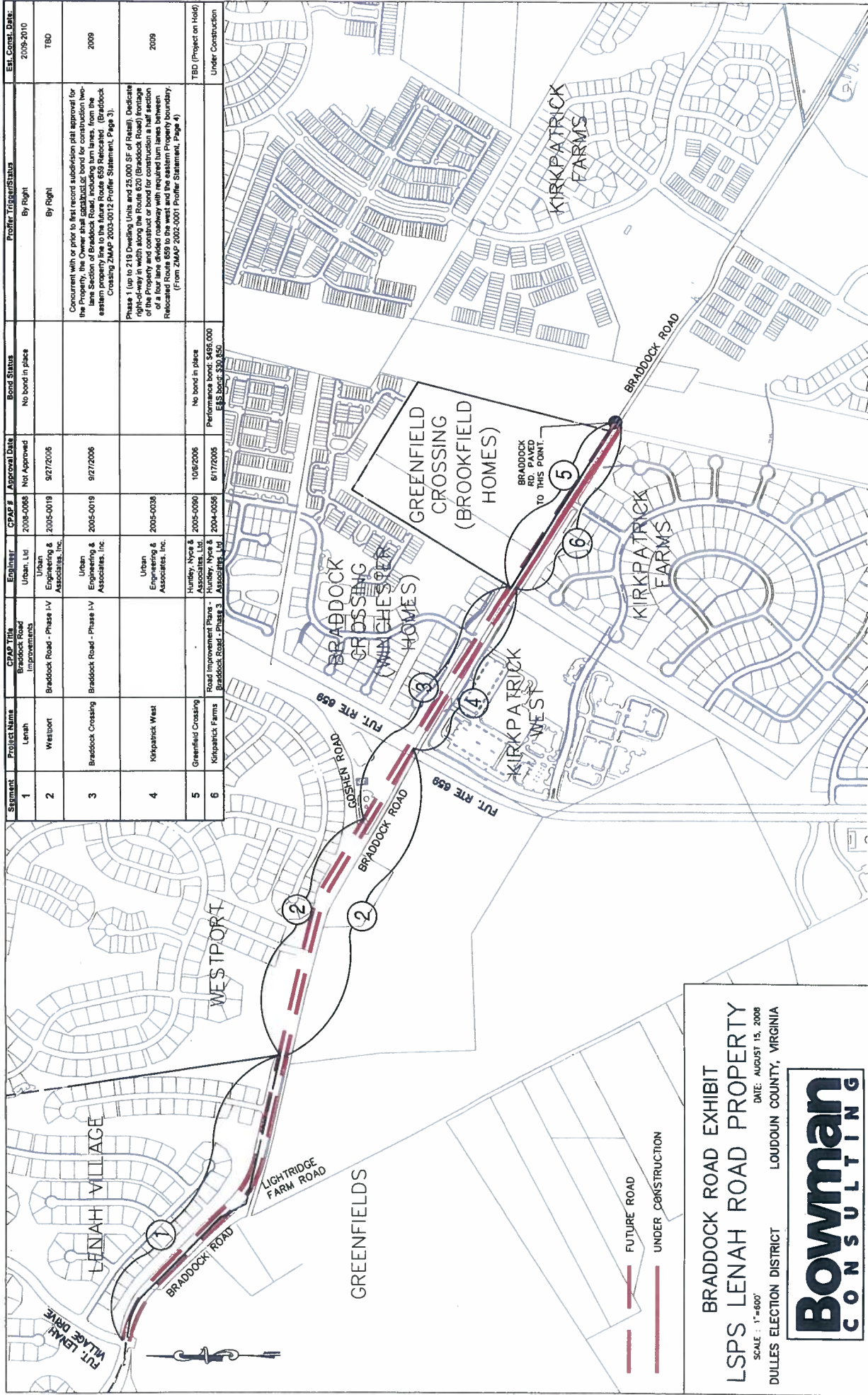
49. How will a new school increase the County's tax base?

Response: In the Statement of Justification (last dated August 5, 2008), it states:

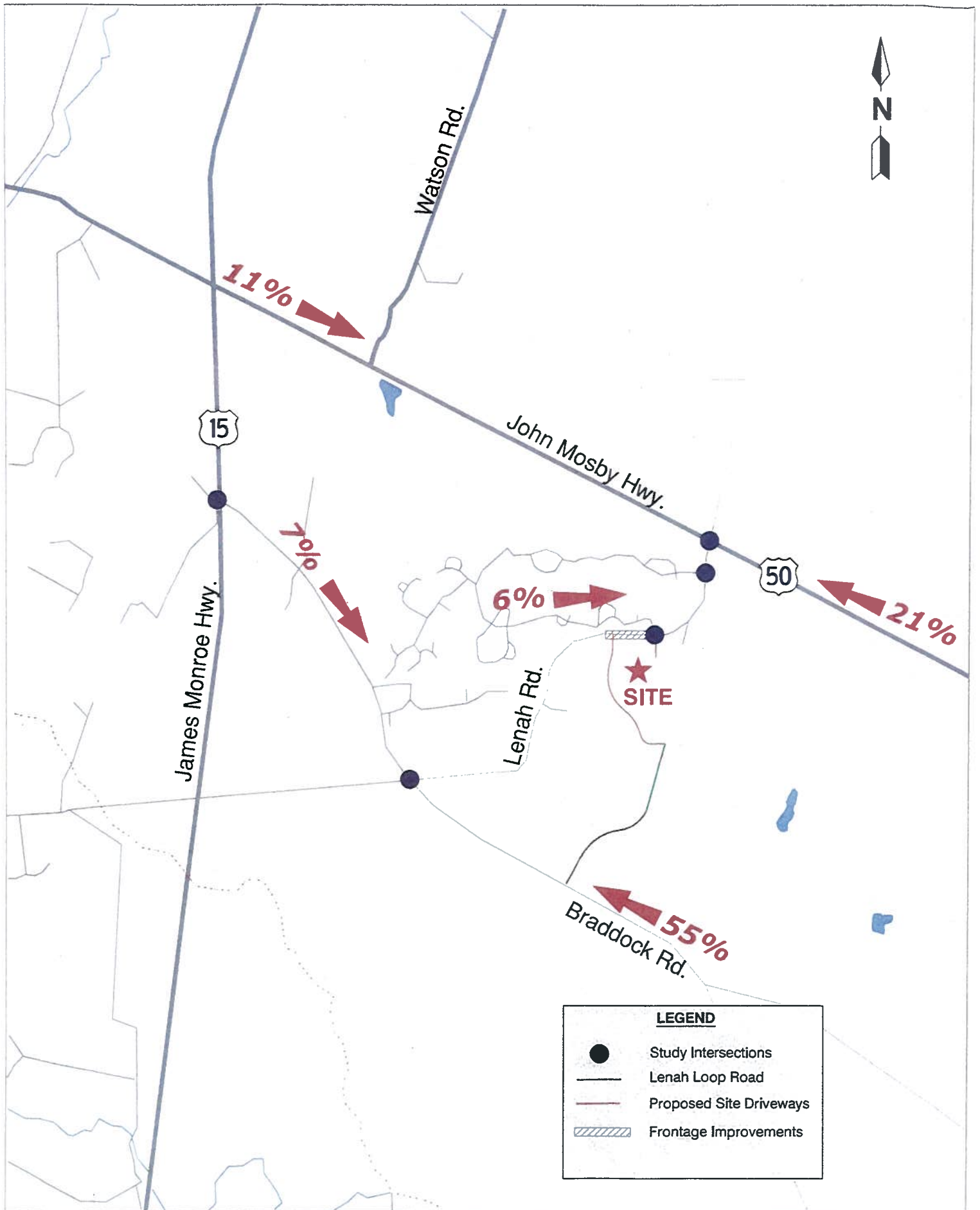
The availability of an excellent education system and adequate facilities to serve the student population will promote the location of businesses to Loudoun County, thereby positively influencing employment opportunities and economic activity. The proposed middle school will provide approximately 140 jobs and the high school will provide approximately 200 jobs.

- Exhibits:
1. Proffered/Conditioned Braddock Road Frontage Improvements
 2. Proposed School Trip Distribution Exhibit
 3. Pervious/Impervious Area Exhibit
 4. Western Property (MCPI 287-46-9040) Buffer Exhibit
 5. Buffer Yard Requirements/Example Exhibit
 6. Lenah Road Buffer (Berm)

ATTACHMENT 1



ATTACHMENT 2



ATTACHMENT 3

Legend

- Pervious Area
- Impervious Area
- Bio Retention Area



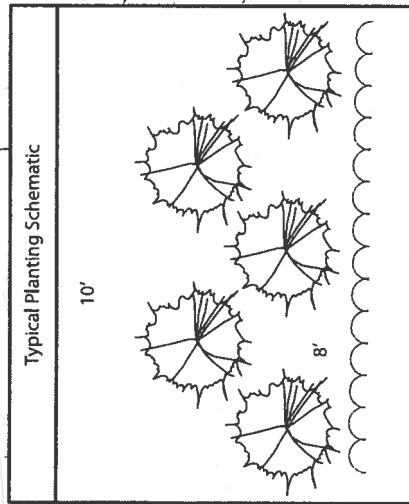
LENAH PROPERTY

IMPERVIOUS AREA EXHIBIT

DATE: SEPTEMBER 23, 2008
SCALE: 1"=150'

Bowman
CONSULTING

ATTACHMENT 4



MCPI 287-46-9040

74 Leyland Cypress Trees (6' to 8' height at planting), spaced diagonally at 10' with 20' row spacing.

Approximately 28' from existing treeline

25' Buffer Yard: Existing trees 10" diameter or less to be preserved (subject to arborist recommendation) and supplemented to provide a Type 2 Buffer.

Proposed privacy fence: 6' black coated vinyl chain link fence

Lenah School Property

LENAH PROPERTY

MCPI 287-46-9040 BUFFER EXHIBIT

DATE: SEPTEMBER 23, 2008
SCALE: 1"=60'

ATTACHMENT 5

- (e) At least one (1) tree for each twenty-five (25) linear feet of land abutting any right-of-way shall be planted in the landscaping strip; however, this requirement shall not be construed as requiring the planting of trees on twenty-five (25) foot centers.
 - (f) Where peripheral landscaping required by this Section conflicts with street planting regulations of the Virginia Department of Transportation, the more restrictive standards shall apply.
- (D) **Requirements for Parking Lots in Residential Districts.**
Where parking lots for more than ten (10) cars are permitted or required in residential districts, the following provisions shall be complied with:
- (1) The lot may be used only for parking and not for any type of commercial loading, sales, dead storage, repair work, dismantling or servicing.
 - (2) A ten (10) foot wide landscaped open space area adjoining any street line or any lot zoned or planned for residential uses shall be provided, guarded with wheel bumpers or curb and gutter and planted in grass and/or shrubs.

5-1414 Buffer Yard and Screening Matrix.

- (A) See Table 5-1414(A) below. Note: Also, please see Section 5-1406(E), Special Situations, which requires a specific Buffer Yard Type in certain situations.

Table 5-1414(A)													
PROPOSED LAND USE GROUPS	ADJACENT LAND USE GROUPS												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Group 1 Dwelling, Single Family Detached	N/A	1	1	2	2	2	3	3	4	4	3	4	2
Group 2 Dwelling, Single Family Attached	1	N/A	1	2	2	2	3	3	4	4	3	4	2
Group 3 Dwelling, Multi-Family Congregate Housing Facility Continuing Care Facility Orphanage or other similar institutions	1	1	N/A	1	1	1	1	2	4	4	3	4	2

Table 5-1414(A)

PROPOSED LAND USE GROUPS	ADJACENT LAND USE GROUPS												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Group 4 Day Care Center Church, Chapel Nursery School Elementary School	2	2	1	N/A	1	1	2	2	3	4	3	4	2
Group 5 Middle and High School Community & Recreation Center, and Library Auditorium, Performing Arts Center and Assembly Hall, and Theater (indoor) Municipal and Governmental Building and Structure Fire, Police, and Rescue Station Medical Care Facility Hospital	2	2	1	1	N/A	1	1	2	3	4	3	4	N/A
Group 6 Financial Institution Office Business Service Establishment Retail Sales Establishment Health & Fitness Center Funeral Home, Mortuary, Crematory Personal Service Establishment	2	2	1	1	1	N/A	N/A	N/A	3	4	2	4	N/A
Group 7 Restaurant Hotel/Motel	3	3	1	2	1	N/A	N/A	N/A	3	4	N/A	4	N/A
Group 8 Drive-in Bank Facility Fast Food Restaurant Drive Through Restaurant Auto Service Station Car Wash Mobile Home Sales and Service Motor Vehicle Sales and Service Parking Lot/Valet Service Flex Industrial Warehousing & Storage Facility	3	3	2	2	2	N/A	N/A	N/A	N/A	2	2	4	N/A
Group 9 Utility Transmission Facility Public Utility Service Center, Storage Yard Telecommunication Facility Radio & Television Broadcasting Station, including Recording Studio Municipal or Governmental	4	4	4	3	3	3	3	N/A	N/A	N/A	2	3	N/A

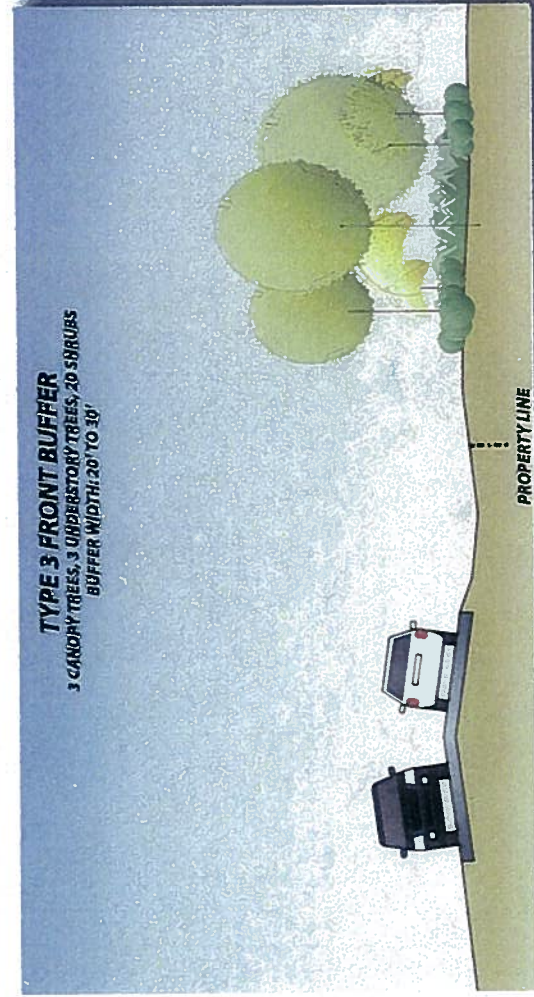
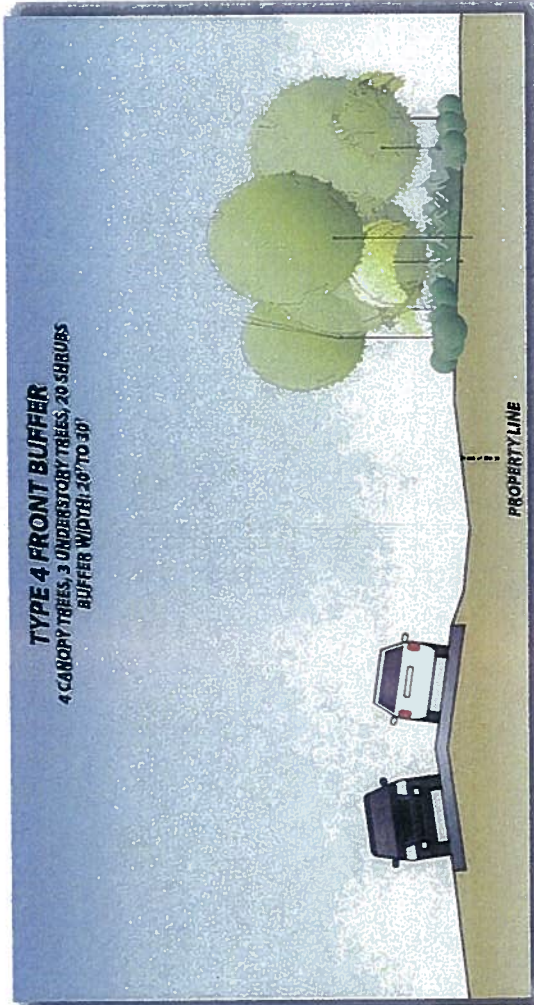
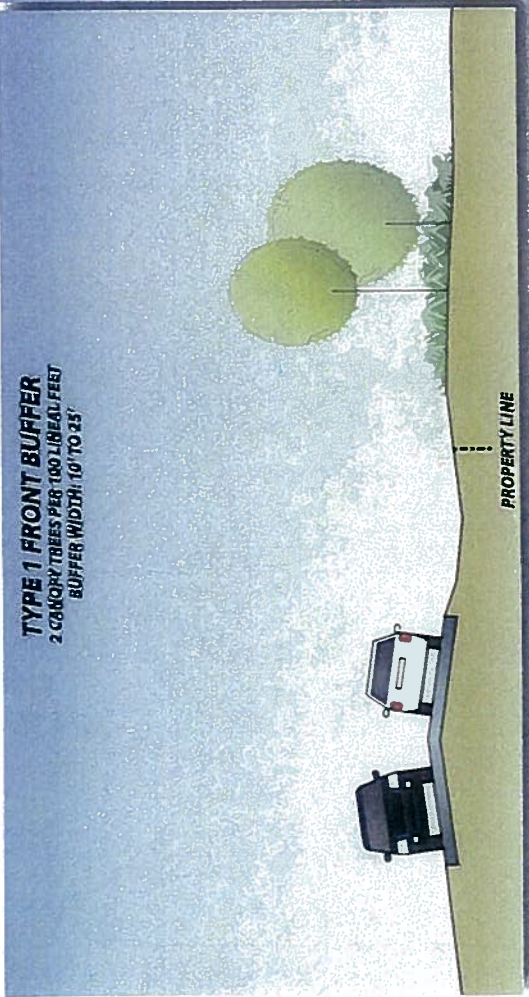
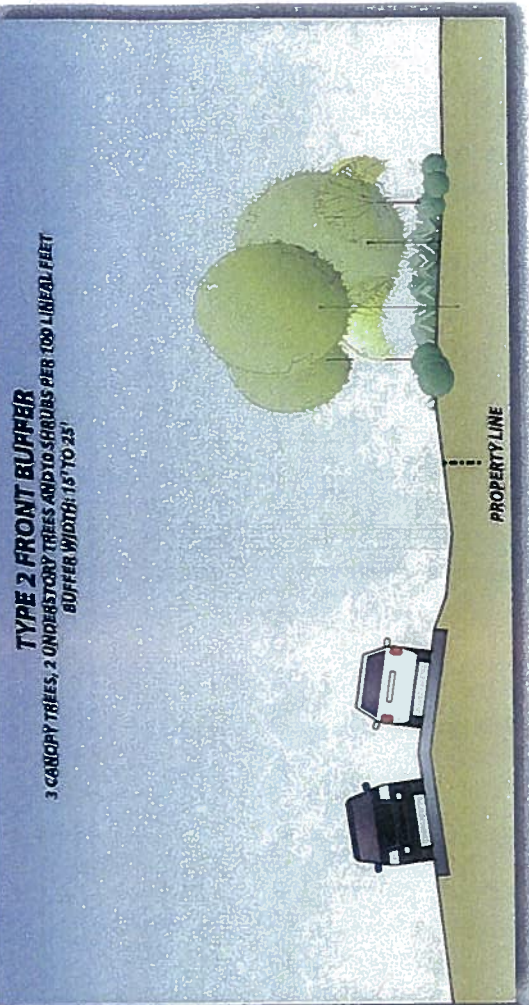
Table 5-1414(A)

PROPOSED LAND USE GROUPS	ADJACENT LAND USE GROUPS												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Storage Yards & Related Facility Water Treatment and Distribution Facility Kennel, outdoor													
Group 10 Bus, Rail, and Truck Terminal Outdoor Storage, Vehicles Newspaper Offices and Distribution Service Lumber & Building Material Yard and Storage Facility Wholesale Trade Office and Storage Facility Heavy Equipment Sale, Rental, and Service Sand, Gravel, Coal & Earth Sales and Storage Facility Boat Sales, Storage and Service Recycling Center Vehicle Wholesale Auction	4	4	4	4	4	4	4	2	3	N/A	N/A	2	N/A
Group 11 Wholesale Printing Laundry, Cleaning, and Dyeing Plant Facilities for Manufacturing, Processing, Assembly, Packaging, Bottling, and Canning	3	3	3	3	3	2	N/A	2	2	N/A	N/A	3	N/A
Group 12 Asphalt or Concrete Mixing Plant General Construction Company, including Hauling, Road Paving, Roofing, and Sewer Metal Fabrication Shop Metal Salvage and Open Storage Yard and Operation Agriculture Processing Facility Outdoor Movie Theater Wood Processing Facility or Sawmill Forging Plant Rifle and Pistol Range, outdoor Sewage Treatment Facility Sanitary Landfill Rendering or Tanning Plants Petroleum or Chemical Refining or Production Ship Yards and Boat Manufacture	4	4	4	4	4	4	4	4	3	2	3	N/A	N/A

Table 5-1414(A)													
PROPOSED LAND USE GROUPS	ADJACENT LAND USE GROUPS												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Junk Yard Fuel Sales													
Group 13 Farming, including livestock and horticultural activity Fur Bearing Animal Raising Stable and Equestrian Center	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

(B) Buffer Yard.

Table 5-1414(B)					
Required Plantings per 100 Lineal Feet of Property Line					
Buffer Yard Type	Canopy Trees	Understory Trees	Shrubs	Evergreen Trees	Other Requirements
(1) Type 1					
Front	2	0	0	0	10' minimum width 25' maximum width
Side/Rear	1	4	0	0	10' minimum width 25' maximum width
(2) Type 2					
Front	3	2	10	0	15' minimum width 25' maximum width
Side/Rear	2	4	10	2	20' minimum width 30' maximum width
(3) Type 3					
Front	3	3	20	0	20' minimum width 30' maximum width
Side/Rear	2	5	10	4	25' minimum width 30' maximum width
(4) Type 4					
Front	4	3	20	0	20' minimum width 30' maximum width
Side/Rear	2	5	10	8	25' minimum width 30' maximum width A Six foot high fence, wall, or berm providing a minimum opacity of 95%



LENAH PROPERTY

FRONT YARD BUFFER COMPARISON

DATE: SEPTEMBER 23, 2008
 SCALE: 1"=10'

ATTACHMENT 6



LENAH PROPERTY

ENHANCED TYPE-2 BUFFER AND BERM EXHIBIT

DATE: SEPTEMBER 23, 2008
NOT TO SCALE

